

# SMW Office

SemanticMediaWiki  
for an  
Office Platform

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# Presentation topics

South Africa – a prototype for an “SMW Office”

- Key factors for a successful prototype
- A prototype “User Desktop”

Challenges

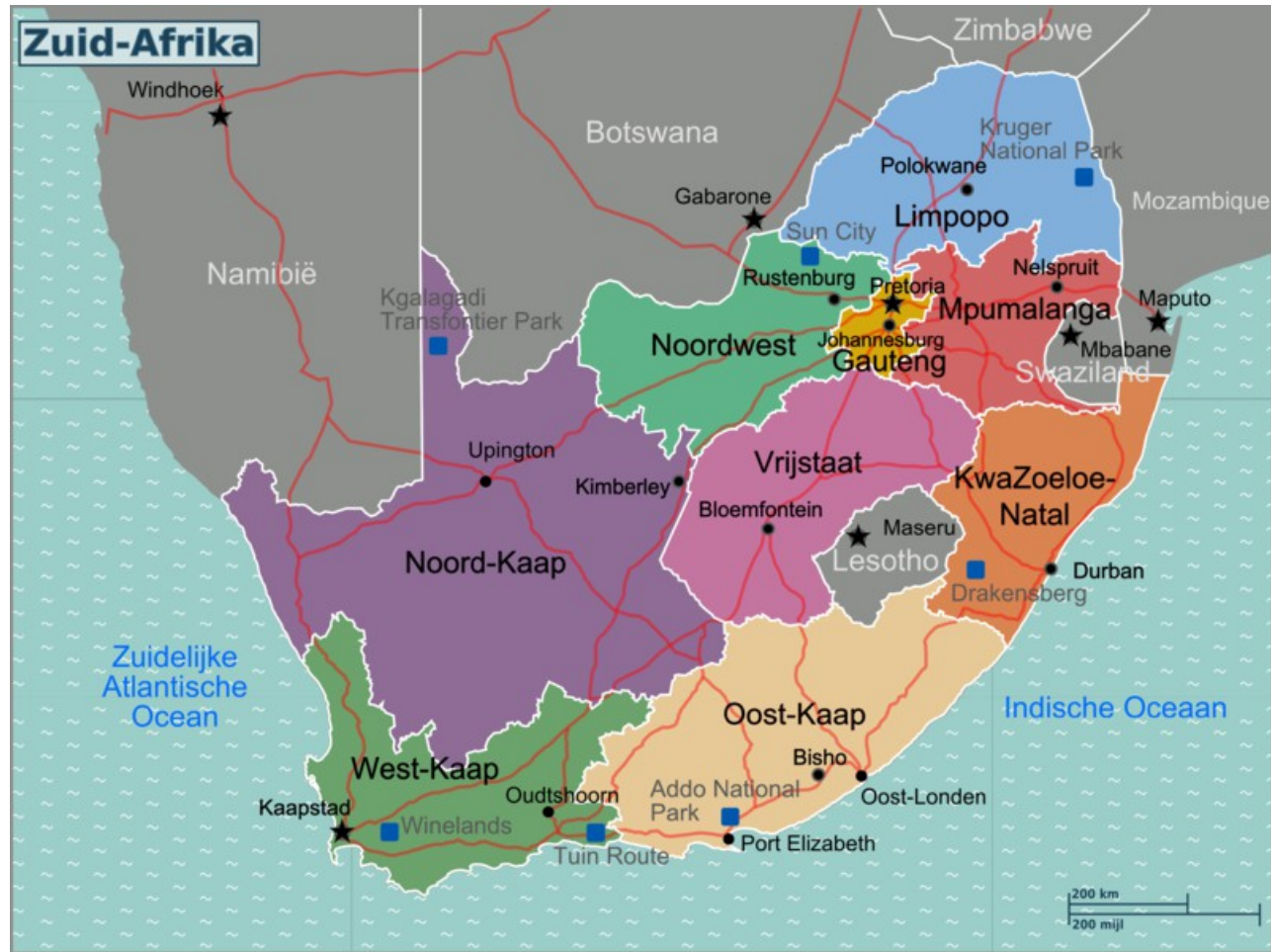
- Pagename ambiguity is a problem
- Red-link handling exposes major inconsistencies
- Coordinating the new Visual Editor with SemanticForms

# South Africa

## Thought Leaders on the Continent



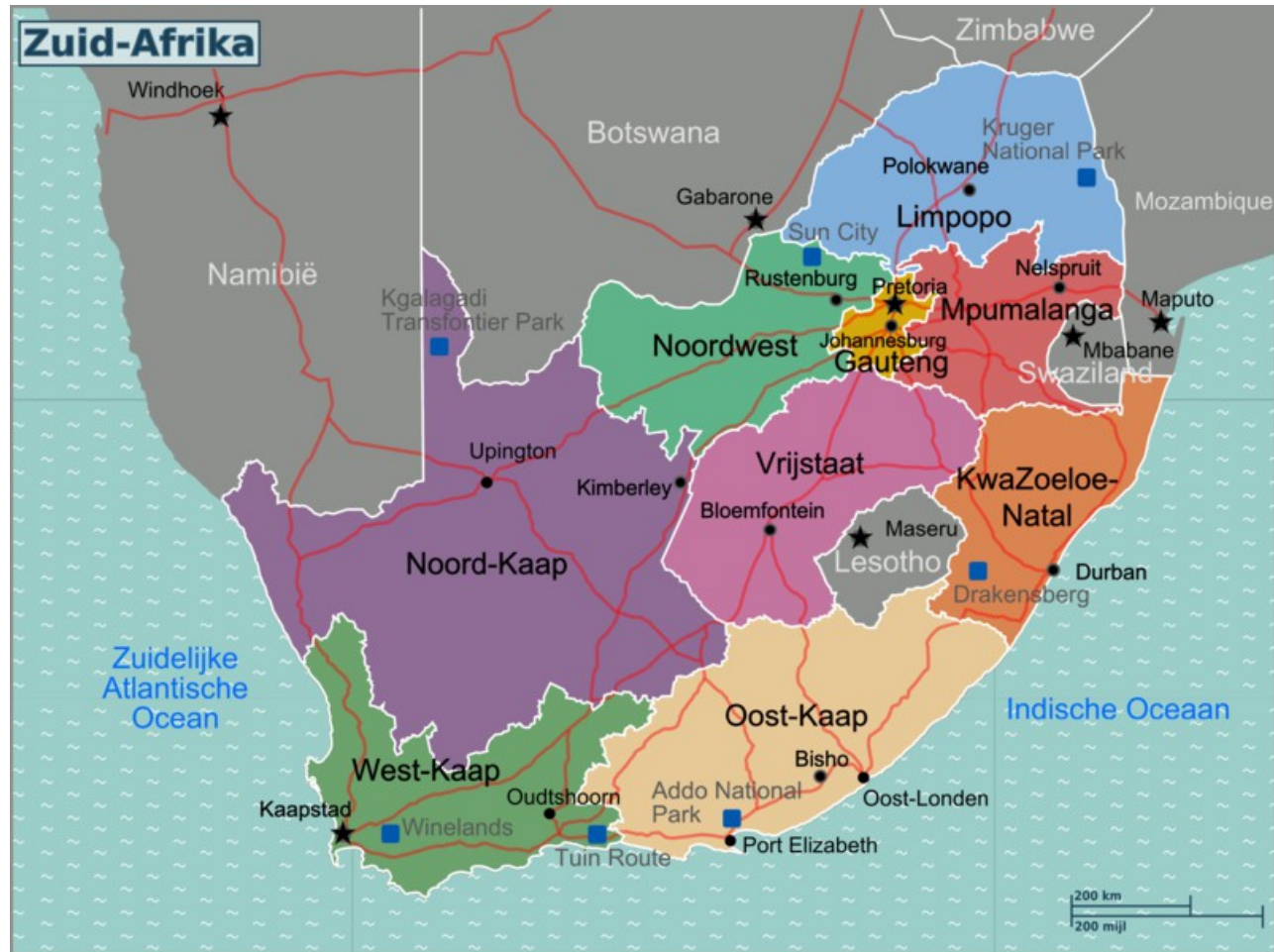
- Ranked as an upper-middle income economy by World Bank.
- Largest economy in Africa, and the 28th-largest in the world.
- 5th highest per capita income in Africa.



# Multi-cultural Community



- Afrikaans, English, Ndebele, Northern Sotho, Sotho, Swazi, Tswana, Tsonga, Venda, Xhosa and Zulu
- Fanagalo, Khoe, Lobedu, Nama, Northern Ndebele, Phuthi, San





# *Priority:* Meet the Needs of Rural Schools & Business



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# First Mile/First Inch Strategy

## Shoestring Technologies Improve Information Flow to Poor in Developing Nations

*To benefit from information and communications technologies (ICTs), disadvantaged populations need access that is both affordable and available in an appropriate social and cultural context*

*FMFI projects demonstrated how access to Internet connectivity can be managed and maintained collectively by communities. This they called the "First Mile", turning the old telco concept of "Last Mile" to the customer on its head. The additional concept of "First Inch" refers to the need for applications that are easy to use by the communities they are designed to assist.*

*Innovative solutions embracing both First Mile and First Inch technologies have demonstrated significant success*



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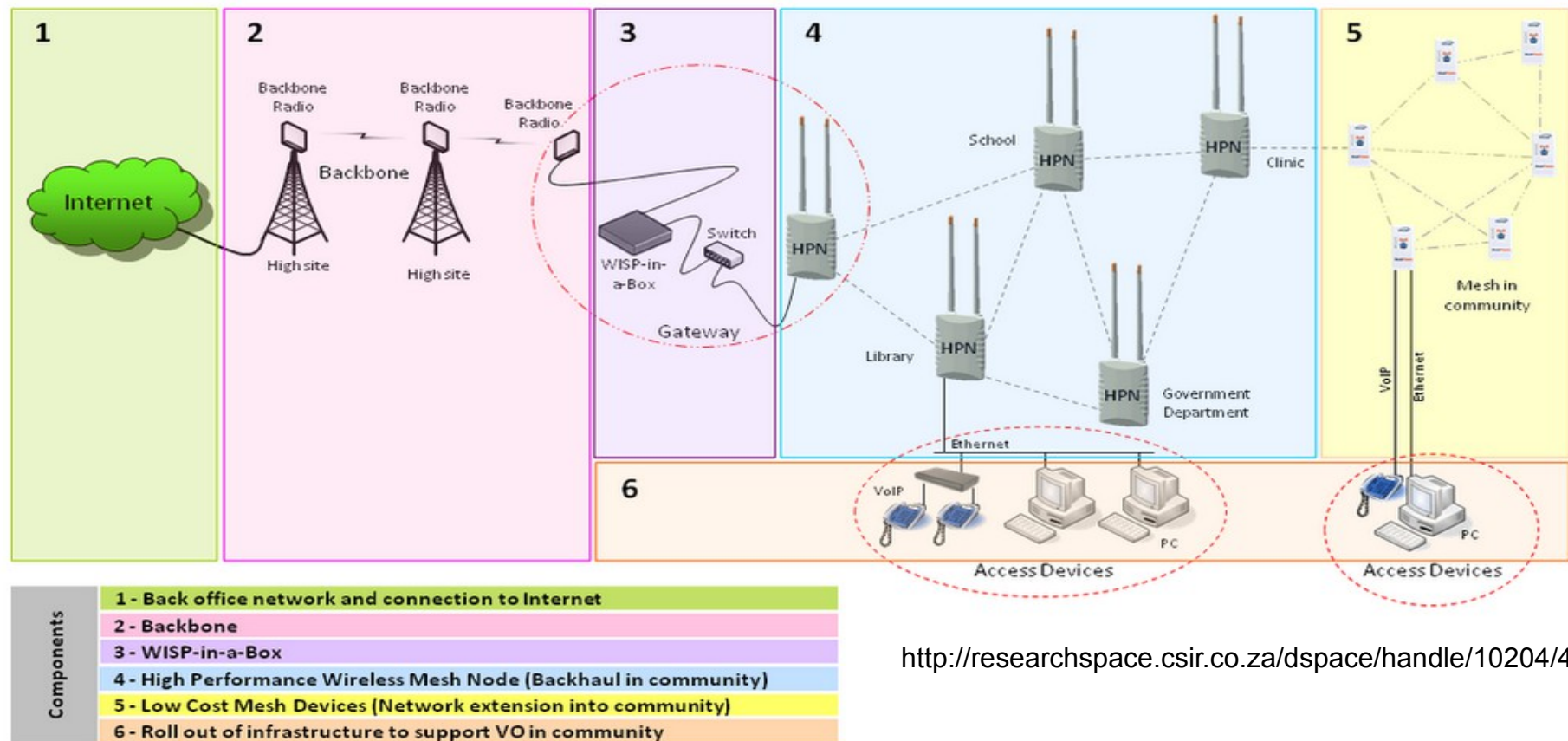
**TIME-LAPSE OF CAPE TOWN DURING LOAD SHEDDING**

by [Eric Nathan](#)  
96,986 views



# “Broadband4All”

## Broadband Provision to Underprivileged Rural Communities



<http://researchspace.csir.co.za/dspace/handle/10204/4331>

# Use of Technologies

## Fast growing Facebook pages in South Africa



[Durex South...](#)

+9 878 982 Fans ↑



[Gumtree South...](#)

+156 650 Fans ↑



[David Miller](#)

+150 867 Fans ↑



[whatsfordinner?](#)

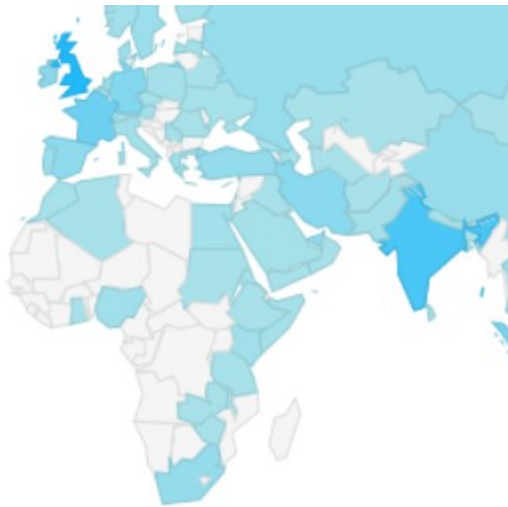
+117 952 Fans ↑



[Cricket South...](#)

+100 875 Fans ↑

## Twitter 'hotness'



In townships,

# cell phones > # smart phones

“Group” phones not uncommon

In schools,

SMS messaging/communications solutions popular



# Wikipedia Activity

[[[Wikipedia:Wikipedia:WikiProject South Africa](#)]]



**WIKIPROJECT  
SOUTH AFRICA**

~16,000 pages  
(4000 categories, 5000  
stubs, 4000 starts, BUT  
50% are talk pages)

MediaWiki: Messages  
EN, AF good  
ZU fair

## Categories for discussion

- 29 Apr 2015 – Category:South African yacht racers (talk · edit · hist) was CfDed by Smartskaft (t · c); see discussion
- 28 Mar 2015 – Category:South Africa Wikipedia administration (talk · edit · hist) CfDed by DexDor (t · c) was closed; see discussion
- 13 Mar 2015 – Category:Suicides by jumping in South Africa (talk · edit · hist) CfDed by Mdann52 bot (t · c) was closed; see discussion
- 13 Mar 2015 – Category:Infectious disease deaths in South Africa (talk · edit · hist) CfDed by Mdann52 bot (t · c) was closed; see discussion
- 13 Mar 2015 – Category:Disease-related deaths in South Africa (talk · edit · hist) CfDed by Mdann52 bot (t · c) was closed; see discussion
- 13 Mar 2015 – Category:Cardiovascular disease deaths in South Africa (talk · edit · hist) CfDed by Mdann52 bot (t · c) was closed; see discussion

<https://af.wikipedia.org>: 35000 content pages, 165 users, 4500 files (16.1)\*

<https://zu.wikipedia.org>: 686 content pages, 7500 users, 1 file (9.7)\*

\* Average edits per page (en.wp.org: 21.3)

# Some Key Factors for use in schools

- Student- and club-centric design
- Social networking integration
- Directed wiki pathways
- Wiki skills training/programs
- Comprehensive forms
- Quality stable ontologies

# How do we do this?

## Student-centric Design

The User namespace, not the Main namespace, is of prime importance

***Create pages in User: who move them to Public: at will***

See Facebook users constantly groom their home pages !!!

***Deploy most tools to User: “desktop” pages***

Interwiki table entries = presence in the SMW Data Network

***Push towards personal & workgroup wikis (wiki farms)***

***Consider Distributed SemanticMediaWiki (DSMW)***

Links and	<b>[[Nelson:Main Page]]</b>
Transclusions	<b>{{Nelson:Main Page}}</b>

***Goal:***

***convert obligatory committment to personal ownership***



# SMW Office

## Elements of an Office Desktop



Navigation ▾

[User page](#) [Discussion](#) [Edit](#) [Edit source](#) [History](#) [Delete](#) [Move](#) [Protect](#) [Unwatch](#)

avatar

## Hub.myschool.wiki

[Use social userpage](#)[Edit profile](#) | [Upload avatar](#) | [My watchlist](#) | [Contributions](#) | [Social profile](#)

Browse among these tools to efficiently handle office needs  
... start collaborating on a [wiki](#)  
Only **Hub.myschool.wiki** can modify this page.

[Our workgroup](#)[Other workgroups](#)[Other wikis](#)[URL bookmarks](#)

### Broadcasts & e-mail



### Calendars



### Contacts

[Office manuals](#)[Office forms](#)[Office archives](#)[Office queries](#)

### Loose media



### Publications



### Translations



## Subpages

[Hub.myschool.wiki](#)[Hub.myschool.wiki/Meeting: test2](#)[Hub.myschool.wiki/Region: Greater Durban RSA](#)[Hub.myschool.wiki/School: Myschoolname](#)[Hub.myschool.wiki/Calendars](#)[Hub.myschool.wiki/Meeting: test3](#)[Hub.myschool.wiki/Region: asdfasdf sdafsadf](#)[Hub.myschool.wiki/School: One school](#)[Hub.myschool.wiki/Contacts](#)[Hub.myschool.wiki/Meeting: testmeeting](#)[Hub.myschool.wiki/Region: sadfkj asdf](#)[Hub.myschool.wiki/somepage](#)[What links here](#)[Related changes](#)[User contributions](#)[Logs](#)[Block user](#)[User rights management](#)[Upload file](#)[Special pages](#)[Printable version](#)[Permanent link](#)[Page information](#)[Browse properties](#)

Navigasie ▾

[Gebruikerblad](#) [Bespreking](#) [Wysig](#) [Wysig bron](#) [Geskiedenis](#) [Skrap](#) [Skuif](#) [Beskerm](#) [Verwyder van dophoulyls](#)

avatar

## Hub.myschool.wiki

[Edit profile](#) | [Upload avatar](#) | [My dophoulyls](#) | [Contributions](#) | [Social profile](#)[Use social userpage](#)

Kyk onder hierdie gereedskap kantoor moet om doeltreffend te hanteer ... begin saam op 'n [wiki](#) net **Hub.myschool.wiki** kan hierdie bladsy te wysig.

[Ons werkgroep](#)[Ander werk groepe](#)[Ander wikis](#)[URL boekmerke](#)

### Uitsendings & e-pos



### Kalenders



### Kontakte

[Kantoor handleidings](#)[Kantoor vorms](#)[Kantoor argiewe](#)[Kantoor navrae](#)

### Los media



### Publikasies



### Vertalings



## Sub bladsye

[Hub.myschool.wiki](#)[Hub.myschool.wiki/Meeting: test2](#)[Hub.myschool.wiki/Region: Greater Durban RSA](#)[Hub.myschool.wiki/School: Myschoolname](#)[Hub.myschool.wiki/Calendars](#)[Hub.myschool.wiki/Meeting: test3](#)[Hub.myschool.wiki/Region: asdfasdf sdafsadf](#)[Hub.myschool.wiki/School: One school](#)[Hub.myschool.wiki/Contacts](#)[Hub.myschool.wiki/Meeting: testmeeting](#)[Hub.myschool.wiki/Region: sadfkj asdf](#)[Hub.myschool.wiki/somepage](#)[Skakels hierheen](#)[Verwante veranderings](#)[Gebruikersbydraes](#)[Logboeke](#)[Blokkeer gebruiker](#)[Bestuur gebruikersregte](#)[Laai lêer](#)[Spesiale bladsye](#)[Drukbare weergawe](#)[Permanente skakel](#)[Bladinligting](#)[Browse properties](#)



avatar

## Hub.myschool.wiki

[Use social userpage](#)[Edit profile](#) | [Upload avatar](#) | [My watchlist](#) | [Contributions](#) | [Social profile](#)

Dlulisa amehlo phakathi la mathuluzi kahle ukusingatha idinga ihhovisi  
... uqale uhlele on a *wiki*  
kuphela **Hub.myschool.wiki** ongalungisa le page.

[Iqembu lethu](#)[Ezenye amaqembu umsebenzi](#)[Nezinye nama-wikis wamahhala](#)[URL amabhukumaka](#)

### Ukusakazwa & e-mail



### Amakhalenda



### Oxhumana nabo

[Amamanyule office](#)[Amafomu office](#)[Office archives](#)[Imibuzo ehhovisi](#)

### Media okuxekethile



### Izincwadi



### Izinguqulo



## Amakhasi ingane

[Hub.myschool.wiki](#)[Hub.myschool.wiki/Meeting: test2](#)[Hub.myschool.wiki/Region: Greater Durban RSA](#)[Hub.myschool.wiki/School: Myschoolname](#)[Hub.myschool.wiki/Calendars](#)[Hub.myschool.wiki/Meeting: test3](#)[Hub.myschool.wiki/Region: asdfasdf sdafsadf](#)[Hub.myschool.wiki/School: One school](#)[Hub.myschool.wiki/Contacts](#)[Hub.myschool.wiki/Meeting: testmeeting](#)[Hub.myschool.wiki/Region: sadfklj asdf](#)[Hub.myschool.wiki/somepage](#)[What links here](#)[Izinguquko ezilandiweyo](#)[Amanikelo amsebenzisi](#)[Logs](#)[Vimbela lo msebenzisi](#)[User rights management](#)[Layisha ifayili](#)[Special pages](#)[Inguqulo eshicilelekayo](#)[Permanent link](#)[Page information](#)[Browse properties](#)

# Multi-Synchronous Collaborative Semantic Wikis

special

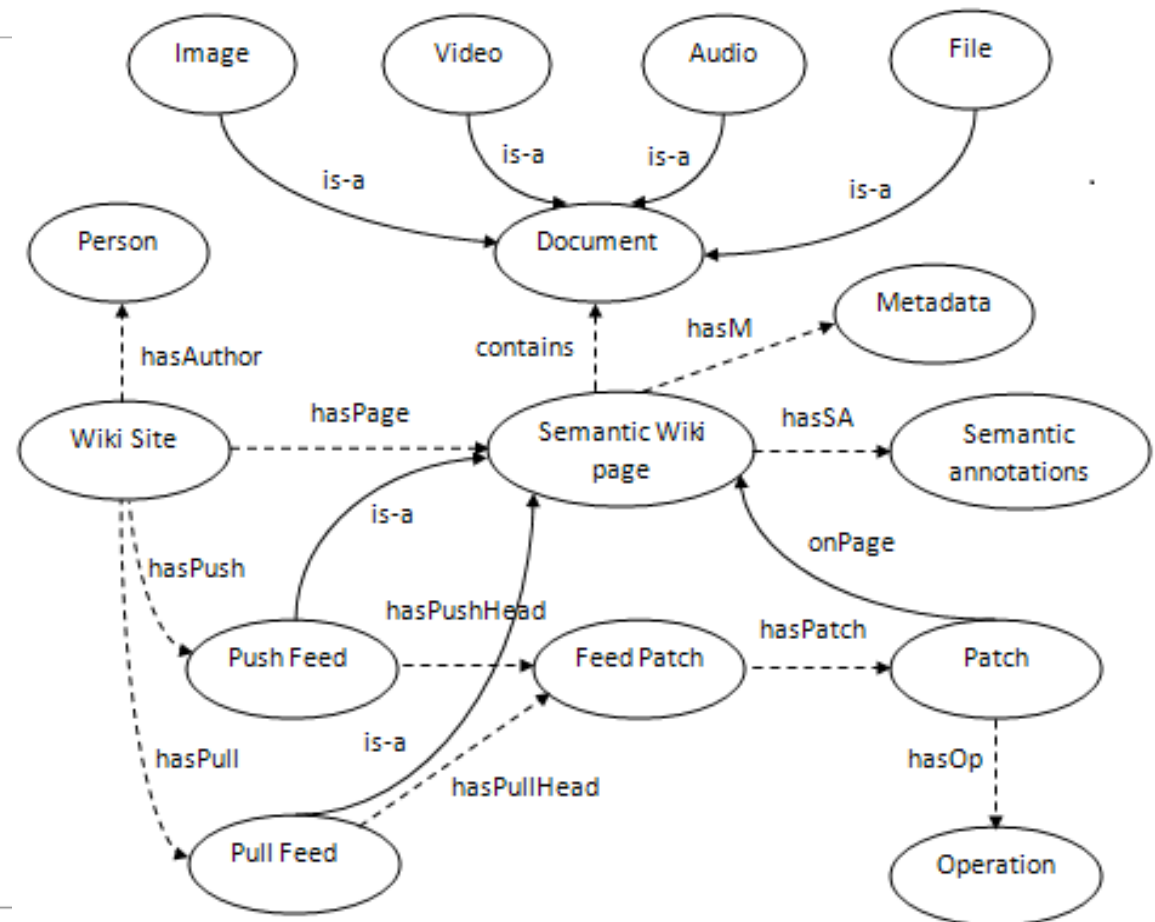
## P2P Administration

PULL: [\[Add\]](#) [\[Remove\]](#) [\[Pull\]](#)

Site	Pages	Remote Patches	Local Patches
<input type="checkbox"/> Mediawiki-1.14.0	[120]	[15]	[10]
<input type="checkbox"/> Loria Semantic Wiki	[508]	[10]	[50]
<input type="checkbox"/> SMW Server	[8048]	[0]	[105]
<input type="checkbox"/> Remote Wiki Test	[85]	[35]	[0]
<input type="checkbox"/> Mediawiki-1.13.2 Server (Remote Site)	[4050]	[65]	[0]
<input type="checkbox"/> Localhost test Semantic wiki	[90]	[9]	[7]

PUSH: [\[Add\]](#) [\[Remove\]](#) [\[Push\]](#)

Site	Pages	Remote Patches	Local Patches
<input type="checkbox"/> Mediawiki-1.14.0	[120]	[15]	[10]
<input type="checkbox"/> Students Collective Semantic Wiki	[2125]	[19]	[0]
<input type="checkbox"/> Loria Semantic Wiki	[508]	[10]	[50]
<input type="checkbox"/> SMW Server	[8048]	[0]	[105]
<input type="checkbox"/> Research Laboratory	[321]	[0]	[0]
<input type="checkbox"/> Localhost test Semantic wiki	[90]	[9]	[7]
<input type="checkbox"/> Remote Wiki Test	[85]	[35]	[0]
<input type="checkbox"/> Mediawiki-1.13.2 Server (Remote Site)	[4050]	[65]	[0]



# Some SMW Problems

Pagename ambiguity makes it hard to find pages

Some red-links lead to proper forms, most don't

No longer integrates with a WYSIWYG editor

No built-in localization support

Reliance throughout on 'glue' templates

No community ontologies or ontology editor

Too few semantic forms/templates are available

Missing property value validation & inferencing

No automated SMW markup from wikitext analysis

Doom & gloom consequences

SMW target audience (non-programmers) resist self-service model

Programmers turn to direct-SQL solutions

End-users consider other/public tools for collaboration & sharing

Wikidata/Wikipedia head towards inline RDFa annotation

(c.f. Joomla/Wordpress GoodRelations, Drupal Semantic Views)



# Ambiguity is a problem

*Disambiguation.* The removal of ambiguity by making something clear. Disambiguation narrows down the meaning of words, a good thing.

**en.Wikipedia contains more than 250,000 disambiguation pages**

Article Talk

---

## Proof positive

---

From Wikipedia, the free encyclopedia

**Proof positive** may also refer to:

- "Proof Positive" (Greene story), a short story by Graham Greene
- *Proof Positive* (album), by American jazz musician J. J. Johnson
- *Proof Positive* (TV series), a paranormal investigation series
- *Proof Positive* a novel by Phillip Margolin

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 *This [disambiguation](#) page lists articles associated with the title **Proof positive**.  
If an [internal link](#) led you here, you may wish to change the link to point directly to the intended article.*

---

Categories: [Disambiguation pages](#)

# Naming pages

Namespace: Pagename



Topic: Topic-name (sequence), topic-context

Examples:

FOSS: SemanticMediaWiki (v2.1), New releases

Census: Baltimore (2012), Maryland

Building: White House, Washington DC

Country: Republic of South Africa, Africa

# Hierarchical Pagenames

Namespace: BasePageName/PageName



Connotes either:

- structural (container) relation
- ownership relation

Examples:

Wpedia: Topic/subtopic (transclusions)

Wbooks: Book/Chapter/Page

Wiversity: Topic-type/Topic

Wsource: Poem/Canto

Wtravel: Location/sublocation

# Ambiguity has a solution

Story: Proof Positive  
Album: Proof Positive  
Series: Proof Positive  
Book: Proof Positive

Article Talk

{{DISPLAYTITLE:Proof positive}}

{{DISPLAYTITLE:  
{{int:Proof positive}} }}

## Proof positive

From Wikipedia, the free encyclopedia

**Proof positive** may also refer to:

- ["Proof Positive" \(Greene story\)](#), a short story by Graham Greene
- *[Proof Positive](#)* (album), by American jazz musician J. J. Johnson
- *[Proof Positive](#)* (TV series), a paranormal investigation series
- *[Proof Positive](#)* a novel by [Phillip Margolin](#)



*This [disambiguation](#) page lists articles associated with the title **Proof positive**.*

*If an [internal link](#) led you here, you may wish to change the link to point directly to the intended article.*

Categories: [Disambiguation pages](#)



# Handling red-links is a problem

## Wanted pages

4. **Hiking in Israel** (15,995 links)




Article **Talk** Create

### Creating Hiking in Israel

- Before creating an article, please read [Wikipedia:Your first article](#).
- You can also [search](#) for an existing article to which you can [redirect](#) this title.
- To experiment, please use the [sandbox](#). To use a wizard to create an article, see the [Article wizard](#).
- When creating an article, provide [references](#) to [reliable published sources](#). An article without references, especially a [biography of](#)
- You can also start your new article at [Special:Mypage/Hiking in Israel](#). There, you can develop the article with less risk of deletion, a [move](#) it into "article space" when it is ready.

Content that *violates any copyrights* will be deleted. Encyclopedic content must be *verifiable*. Work submitted to Wikipedia can be edited, subject to *certain terms and conditions*.

**B I**  [Advanced](#) [Special characters](#) [Help](#) [Cite](#)

## How to link to a SemanticForm

1. MediaWiki:*namespace*
2. Property:Has default form
3. {{#formredlink}} – *SF 3.1!*

## When is the form “unknowable”?

1. Special:Search
2. Query results
3. Many other special pages

## When is a form “ambiguous”?

1. Has alternate form
2. Form maintenance process

# Handling red-links has a solution

**Topic type == SemanticForm**

Wanted pages

. 4. **Topic: Hiking in Israel** (15,995 links)



**Form:Topic**

#redirect [[Form:Topic (v1.0)]]

*Solicit for the topic type*

Wanted pages

4. **Hiking in Israel** (15,995 links)



**Form:NewPage**

#redirect [[Form:NewPage (v1.0)]]



**Form:Topic**

#redirect [[Form:Topic (v1.0)]]



**Hiking in Israel**

#redirect [[Topic: Hiking in Israel]]

# Form:NewPage

## Create a page in this wiki

**name each part of a wiki-page title**

language

EN

TOPIC

Any topic:

DISPLAY NAME

CONTEXT

NUMBER

**place this new page into**

☒ Namespace: User ☐ Namespace: Main ☐ Namespace: Other

☒ **more ...**

**make this new page a subpage of**

**initialize this new page with**

Continue to form

Cancel

[Upload file](#) [Special pages](#) [Printable version](#)

[Privacy policy](#) [About hub.myschool.wiki](#) [Disclaimers](#)

# Form:NewPage?action=view

## Create a page in this wiki

This is a list of the kinds of pages you can create in this wiki.

Topic/form	Use this form for
Administrator	School principals and other non-teaching staff.
Any topic	A topic not otherwise listed.
Broadcast	An email or SMS message broadcast to one or more recipients.
Calendar	A weekly/monthly/other calendar (containing dated notations).
Educator	Teachers and their (teaching) assistants.
Guardian	Parents, caretakers and custodians (of students).
Meeting	Course lectures and conventional meetings, not presentations.
<a href="#">Meeting Minutes</a>	A report (who, where, etc.) about a meeting that occurred.
Notation	Page notes or calendar entries.
Person	Persons other than students, educators, guardians or administrators.
Region	A geographic area in which schools are located.
School	A public or private institution of learning.
Student	Anyone enrolled in one or more courses at a school.
<a href="#">Task</a>	Work assigned to persons whose progress is tracked.
<a href="#">Translation</a>	Translated text used for broadcasts, e.g., weather alerts.
<a href="#">Wiki</a>	none

[What links here](#) [Related changes](#) [Upload file](#) [Special pages](#) [Printable version](#) [Permanent link](#)

This page was last modified on May 1, 2015, at 22:25.

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# Redlink problem solved!

## Search results

Region: Seattle SMSA

Search

[Content pages](#) [Multimedia](#) [Translations](#) [Everything](#) [Advanced](#)

There were no results matching the query.

Create the page "**Region: Seattle SMSA**" on this wiki!

[Upload file](#) [Special pages](#) [Printable version](#)

[Privacy policy](#) [About hub.myschool.wiki](#) [Disclaimers](#)

## (create): Region: Seattle SMSA

### Region information

Region title

Multiple language variants are each on a separate line, and each name is prefixed with a language code, for example:

en: Greater Pretoria

af: Groter Pretoria

Type of region

Form:Region/dc:Type

Short description

Multiple language variants are each on a separate line, and each short description is prefixed with a language code, for example:

en: The Greater Pretoria region of Gauteng includes the towns Centurion, Cullinan and Bronkhorstspuit and Bapsfontein.

zu: Isifunda Greater Pretoria of eGauteng kuhlanganisa amadolobha Centurion, Cullinan no Bronkhorstspuit and Bapsfontein.

### Region location

Adjacent to regions

Specify the regions which share a border with this region, one per line, for example: Region: Rural Gauteng

Is within regions

Specify the regions which completely contain this region, one per line, for example: Region: Gauteng Province

Same as

Declare other pages in this wiki that represent this same region, one per line, for example: Region: Jacaranda City

# SemanticForms

## page creation & editing

### Start of form

Enter the name of a page here, and select the form to edit it with. If this page already exists, you will be sent to the form for editing that page. Otherwise, you will be sent to the form for adding the page.

 Form: Administrator-1.0 ▼

Create or edit

Upload file Special pages Printable version

Form is  
displayed

User enters both  
structured + unstructured  
page content

Form is  
saved

Page displays  
templates' output  
and "free text"

Page is  
saved

"Edit (source)"

User edits the  
raw wikitext

# Visual Editor & SemanticForms page creation & editing

## Start of form

Enter the name of a page here, and select the form to edit it with. If this page already exists, you will be sent to the form for editing that page. Otherwise, you will be sent to the form for adding the page.

Form: Administrator-1.0 ▼

Create or edit

Upload file Special pages Printable version

Form is  
displayed

User enters ~~both~~  
structured + ~~unstructured~~  
page content

“Edit (with form)”

Form is  
saved

Page displays  
templates' output  
and “free text”

Page is  
saved

User performs  
“in-place” WYSIWYG  
editing of all content  
on the page,  
*including template calls*  
(SemForms' territory)

“VEdit”

“Edit (source)”

User edits the  
raw wikitext

# Options for attaching Semantic Properties

## Simple annotations

```
[[ pname :: pvalue | dvalue ]]  
{{#set: pname=pvalue}}
```

## Type templates

```
{{tname  
|pname = pvalue  
}}
```

## Property templates

### Embedded

```
{{semantic  
|facts=  
  {{pname|pvalue}}  
}}
```

### Not embedded

```
{{pname|pvalue}}
```

## Syntactical text

```
{{Turtle|  
  
this:topic  
  pname pvalue;  
  
.  
}}
```

Legend: *tname*=template-name; *pname*=property-name; *pvalue*=property-value; *dvalue*=display-value



# Visual Editor modifications

## Help users enter semantic templates

(Specifications) Customize TemplateData\* to auto-populate & validate template parameter fields from data models defined by the wiki's ontology.

(Initiation) Customize Visual Editor so that user can choose between semantic (data storage) & non-semantic (display) templates.

(Initiation) Preload page content dependent on topic type.

(Entry) Customize Visual Editor template parameter widgets for autocompletion & validation of semantic template parameter values.

(Entry) Provide an “Annotation Editor” equivalent to Visual Editor for inline property annotations.

\* TemplateData manages a JSON structure within Template:*name*/doc pages, a practical requirement for Veditor ... this structure contains labels, description, data type, examples and flags for each parameter to the template.

# Much work to do!



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